APPENDIX D Public Involvement Process





EA Engineering, Science, and Technology 121 South 13th St., Suite 204 Lincoln, NE 68508 402-476-3766

Upper Southeast Salt Creek Trunk Sewer Open House March 4, 2004

AGENDA

7:00 Welcome/Introductions

Project Background/History – Steve Masters, Public Works/Utilities

Alternative Routes – Dale Schlautman, EA Engineering

Small Group Discussions –

Habitat Characteristics Park Restoration Construction Phase

General Session, Summary

Adjourn

The City of Lincoln Public Works/Utilities Department and EA Engineering would like to thank you for coming tonight and participating in the open house. We hope the information you received tonight has been helpful in understanding the project.

Please fill out comment cards with suggestions or concerns that you have. You may also direct questions to Dale Schlautman or Holly Lionberger at EA Engineering (476-3766).





EA Engineering, Science, and Technology 121 South 13th St., Suite 204 Lincoln, NE 68508 402-476-3766

Upper Southeast Salt Creek Trunk Sewer

What: Informational Open House

Where: Scott Middle School Multi-Purpose Room

2200 Pine Lake Road (parking and entrance on north side)

When: Thursday, March 4, 2004, 7:00-9:00 p.m.

Trunk Sewer Project

The City of Lincoln recently initiated a Preliminary Routing/Corridor Study to assess potential trunk sewer alignments to serve citizens in Southwest Lincoln as the City continues to grow. EA Engineering, Science, & Technology is working with the City on this project. Various alternate routes have been evaluated and a preliminary route has been proposed. A portion of the proposed route passes through the eastern edge of Wilderness Park. (See map below).

The Lincoln Public Works/Utilities Department is seeking input from interested parties regarding the proposed route. The open house will present an overview of the project and provide an opportunity for individuals to express their ideas and concerns. The input collected during this open house will be used to develop variations for improving the proposed route.

You can help develop the best design solution by:

- Attending the Open House
- Identifying key issues regarding the proposed route
- Sharing ideas for Park restoration

Please Call With Questions

If you have questions regarding this project, you may call Dale Schlautman or Holly Lionberger with EA Engineering at 476-3766. We look forward to working with you in the development of this community project.



Project Site Map Southwest Lincoln





EA Engineering, Science, and Technology 121 South 13th St., Suite 204 Lincoln, NE 68508 402-476-3766

Preliminary Routing/Corridor Study and Design of Upper Southeast Salt Creek Trunk Sewer for the Lincoln Wastewater System

Introduction:

The City of Lincoln has initiated a Preliminary Routing/Corridor Study to assess potential trunk sewer alignments to serve citizens in Southwest Lincoln as the community continues to grow. EA Engineering, Science, & Technology (EA) is working with the City on this project. Various alternate routes have been evaluated and a preliminary route has been proposed as the best choice alternative. A portion of this proposed route passes through the eastern edge of Wilderness Park. (See Evaluated Alternate Routes figure below). The purpose of this open house is to present the reasons for selecting the best choice alternative and to gain input from the public on refinements to the route to the best possible advantage of Wilderness Park. Specific topics for discussion include the current habitat characteristics of the Park, the potential for Park restoration, and the construction phase of the project.

A second open house will be held on Thursday, March 25, 2004 from 7:00-9:00 p.m. at the Scott Middle School Multi-Purpose Room, 2200 Pine Lake Road to present the information gained from tonight's public meeting.

Dark Blue (Proposed Route) – gravity sewer line, open cut through Wilderness Park.

- The trunk sewer will pass through a section of Wilderness Park that was formerly agricultural fields, currently overgrown with brome grass and scrub trees.
- After construction, the affected area could be returned to natural prairie grass and wildflowers.
- A diagonal bore under the RR at the upstream end could be used to avoid old growth trees and a Salt Creek oxbow.
- There is potential for tunneling under portions of Wilderness Park where sensitive areas are identified.

Other Alternative Routes Evaluated:

Brown – 20,000 gpm pumping station

- 30-inch force main, open cut
- 42-inch gravity sewer, open cut
- passes through Dakota Sandstone, and requires operation and maintenance on the pumping station

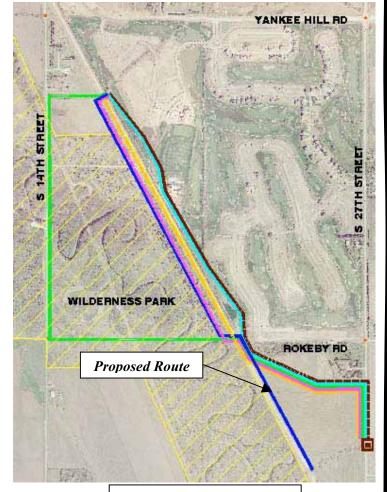
Light Blue – 48-inch gravity sewer, open cut - requires deep cuts through Dakota Sandstone

Orange – 48-inch gravity sewer, open cut -48-inch gravity sewer, tunnel in RR ROW

- construction in RR ROW

Purple – 48-inch gravity sewer, open cut - 48-inch gravity sewer, tunnel in Wilderness Park

Green – 66-inch gravity sewer, 3 siphons, open cut - passes through rare bird habitat



Evaluated Alternate Routes

Please Call With Questions

If you have questions regarding this project, please call Dale Schlautman or Holly Lionberger with EA Engineering at 476-3766. We look forward to working with you in the development of this community project.

Frequently Asked Questions

Engineering Related Questions:

Why do we need a sewer in this area?

New developments are continually being built in Lincoln to accommodate our increasing population. As these areas are constructed, utility services will need to be made available. For this project, the City of Lincoln anticipates that by the year 2025, the City will have expanded to cover the area east of Wilderness Park from Yankee Hill Road to Saltillo Road and from 27th Street to 70th Street. By year 2050, the City of Lincoln anticipates that this area will be expand to include the land, from Saltillo Road to Wittstruck Road and from 27th Street to 84th Street.

What is open-cut trenching?

Open-cut trenching is the most common method of underground utility construction. Open-cut trenching involves digging a ditch in the ground, called a trench. The dirt that is dug out is placed on one side of the trench, and the pipe is set on the other side. The contractor lowers the pipe into the open trench and covers it up with the soil that was dug out. In general, open-cut trenching is significantly less expensive than other methods of utility construction.

How are utilities installed by boring?

Boring is a method of installing underground utilities with minimal disturbance of the ground surface. Borings are commonly used to install utilities beneath existing railroads and roadways. A hole, or bore pit, is dug out at opposite ends of where the pipe is to be placed. Equipment is then used to horizontally drill a tunnel between the two pits, and pipe segments are either pushed or pulled into the tunnel. Boring is usually much more expensive than open cut.

What is the difference between a gravity sewer and a pressure sewer?

A gravity sewer takes advantage of the natural tendency of water to flow to the lowest point possible. All the pipes in a gravity sewer system are positioned, so that water will flow from the high end to the low end by the force of gravity.

The other common type of sewer is a pressurized system. In a pressure system, energy is used to pump against gravity, moving water from a low point to a high point. This method can be very expensive, due to construction, operation, and maintenance costs, and is generally avoided if a gravity sewer is possible.

Habitat Related Questions:

What are old fields?

The old field areas of Wilderness Park, are portions of the Park that were once used for farming activities. Some of these areas have been reseeded with grass (smooth brome) and are undergoing a natural sequence of habitat changes. Currently invasive tree species such as Siberian elm, Green ash, Honey locust and Red cedars are rapidly overgrowing some of these grass areas.

What is the potential for Park restoration post-construction?

Plans are not firm yet, but this is a great opportunity for the Park. Reestablishment of native grasses and forbs would be appropriate in many areas.





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Upper Southeast Salt Creek Trunk Sewer Open House March 25, 2004

AGENDA

7:00 Welcome/Introductions

Overview of Previous Meeting – Holly Lionberger, EA

Preferred Route Refinements – Dale Schlautman, EA

Park Restoration – Deanna Pulse, EA

Summary – Steve Masters, Public Works/Utilities

9:00 Adjourn

The City of Lincoln Public Works/Utilities Department and EA Engineering would like to thank you for coming tonight and participating in the open house. We hope the information you received tonight has been helpful in understanding the project.

Please fill out comment cards with suggestions or concerns that you have. You may also direct questions to Dale Schlautman or Holly Lionberger at EA Engineering (476-3766).





EA Engineering, Science, and Technology 121 South 13th St., Suite 204 Lincoln, NE 68508

Upper Southeast Salt Creek Trunk Sewer Open House March 25, 2004

SUMMARY OF COMMENTS/DISCUSSIONS - PUBLIC MEETING MARCH 4, 2004

MOST COMMONLY ASKED QUESTIONS (Answered below and in presentation)

Can the railroad crossover be moved north to avoid the bur oaks and the Salt Creek oxbow?

Can the Salt Creek course be altered?

What are the maintenance requirements for the sewer line?

What will be involved in the maintenance of the restoration areas?

What are the potential cumulative effects of this project and future projects to the park?

HABITAT MODULE

- Q: Where is the rare bird habitat?
- A: The rare bird habitat is located along Rokeby Road between 14th Street and the old Union Pacific Railroad tracks. What is unique about this area is that the Carolina Wren and the Bell's Vireo are using the habitat for nesting. The habitat is not rare, but the birds are listed on the Nebraska Natural Heritage Program rare animal list.
- Q: What kind of routine maintenance/access will be necessary?
- A: There will be manholes accessed for sewer cleaning. Trucks will use the park maintenance trails.
- Q: What will the park be restored to? Is this the last utility that will encroach on the park and will there be more? The cumulative effect may have a big impact.
- A: The disturbed areas will be restored back to native prairie. Sewers rely on gravity to drain and are therefore most impacted by topography. Other utilities such as power, water and gas, do not need to follow along a natural slope, and could be more easily routed around the Park. Since the sewer line will be underground, it may have less of an impact than a road or power line. Individual utilities need to be considered on a case by case basis.
- Q: Why couldn't the sewer stay on the east side?
- A: This would require boring through sandstone and having deep excavations. This would increase the cost of the project significantly. The sewer construction through the Park is an excellent opportunity to begin the restoration process.

OTHER COMMENTS:

- Friends of Wilderness Park completed a Park study with the Parks & Recreation Planning Department about a year ago.
- Addition of a trail was suggested.

CONSTRUCTION MODULE

- Q: What is the time frame for the project? How much disturbance will the project create for the park?
- A: It could take as long as three years before the project is completed. The project will involve planning, design and construction phases. A minimum 125 feet to a potential 150 –feet wide construction easement will be required. Typically no more than 100-feet of trench will be open at any one time for practical purposes.
- Q: What type of material will be used for the pipes and how will they be sealed? How many manholes are necessary?
- A: Several different types of pipe material are being considered. A common pipe material is reinforced concrete with a PVC lining, but the exact material for this project has not been selected at this time. Manholes will be placed about every 600 feet and at bends in the pipe. With around 4,000 feet of pipe and about four inflection points in the Park, this would mean approximately 10-12 manholes.
- Q: Can there be a trail or easy access to the park? Is there funding?
- A: There will be an access road for sewer maintenance. A trail and park access have been mentioned as part of the future plan for the Park, but may not be a part of this project.
- Q: Will there be a need for a treatment plant in SW Lincoln?
- A: As given in the Lincoln Wastewater Facilities Plan Update (2003), under the 50-year horizon, a southwest treatment plant should be considered depending on the future growth of the community.
- Q: What are the options for crossing the railroad tracks at the south end?
- A: Right now three options are being evaluated for crossing the railroad at the south end.
 - 1. Boring under the RR north of the existing stand of bur oak trees into a stormwater detention cell on the golf course side. This would require a deep bore pit and might involve going through sandstone. It would also require crossing under the drainage ditch directly south of the golf course and avoiding the existing storm sewer outlet.
 - 2. Boring under the RR north of the existing stand of bur oak trees, and end up south of the existing drainage ditch south of the golf course. The railroad typically requires that pipelines cross the tracks at a 90° angle. They may allow some deviation to that, but probably not much. If this is the case, this option would not be feasible.
 - 3. With as minimal impact on the bur oaks as possible, bore under the RR farther south ending up in the field south of the golf course. This would allow the required railroad crossing angle to be met, would hopefully avoid the sandstone, and would not require crossing the drainage ditch and avoiding the existing storm sewer.
- Q: Can the Salt Creek course be rerouted (cut off oxbow)? How deep is the water table?
- A: Changing the Salt Creek oxbow would require a US Army Corps of Engineers 404 permit which could be very time consuming. Changing the creek course will be avoided. The route will place as much separation between the creek and the sewer as possible. From borings done previously along the proposed route, the water table is around 15 18 feet below the ground surface. If water is encountered in trenching, the pipeline trench would need to be dewatered.

RESTORATION MODULE (TOPICS OF DISCUSSION)

- Suggested creating a transition from the golf course to the wooded area grassland, shrubs, trees.
- Suggested softening the boundary on the east side of the Park area create a curved corridor rather than a straight line boundary.
- Suggested tree cluster plantings throughout the restoration area.
- Planting and restoration have to provide access for maintenance (burning or mowing).
- Mowing could be done every few years to invigorate the grass and eliminate new tree growth. Trees would not interfere with the sewer line if they are not planted directly over the line.





EA Engineering, Science, and Technology 121 South 13th St., Suite 204 Lincoln, NE 68508 402-476-3766

Upper Southeast Salt Creek Trunk Sewer

March 25, 2004 WILDERNESS PARK RESTORATION

1. PREVIOUSLY DISCUSSED OPTIONS

- Grasslands, shrubs, trees succession
- Soften the straight east boundary line
- Tree cluster plantings
- Wetlands restoration

WALK-THROUGH FINDINGS

- Typical Site Conditions
- Grasses, shrubs further to west of east fence line
- Wetland areas
- Hardwoods along east fence line
- Bur Oak Community

3. PREPARATION ACTIVITIES

- Clearing and grubbing, removal of brush, log piles
- Mulch, wood chips

4. PRAIRIE GRASS MIXTURES

- Short Grass Mixture
 - Short and mid-height grasses (1-3 ft), compatible in height for wildflower mixtures
 - Buffalograss, Blue Grama, Sideoats Grama and Little Bluestem
 - Seed rate Broadcast 1 lb/3,000 sq ft, Drilled 8 lbs/acre
- Tall and Mid-Height Grass Mixture
 - Tall and mid-height grasses (Big and Little Bluestem, Indiangrass, Switchgrass, Sideoats Grama, Western Wheatgrass and Virginia Wildrye)
 - Seed rate Broadcast 1 lb/2,000 sq, ft, Drilled 10 lb/acre
 - Provides greater competition to wildflowers, habitat for wildlife, effective sound barrier
 - Red, gold and purple colors adds to aesthetic value
- Floodplain Mixture
 - Variety of inundation tolerances, recommended for fluctuating shorelines and lowlands
 - Species include Virginia/Canada wildryes, Switchgrass, Western Wheatgrass, Red Top and Big Bluestem
 - Seed rate 12-15 lb/acre in spring or in fall after frost

5. WILDFLOWER MIXTURES

- Short Wildflower mixture
 - Perennial and annual mixture, height 1-2+ ft height
 - 17 species including black-eyed susan, blue flax, coreopsis, primrose, aster, yarrow, daisy, coneflower
 - Seed rate –Broadcast 1 oz/300 sq ft, Drill 1 lb/acre
- Wildflower mixture
 - 25 varieties perennial and annuals, adapted to various conditions, 7 reseeding annual species to compete against weeds while perennials get established
 - Seed rate Broadcast 1 oz/400 sq ft, Drill 1 lb/5,000 sq ft.
- Habitat Mixture (Wildflower/legume mixture)
 - Attracts butterflies, nesting cover for birds, stabilizes soils, soil builder
 - Contains 17 species wildflowers, (50% by weight), also clovers, ground covers
 - Seeding rate Broadcast 1 lb/3,500 sq ft, Drill 10 lb/acre



March 26, 2004

Dale Schlautmm
EA Engineering Services and Technology
121 South 13th Street, Suite 204
Lincoln, Ne 68508

Dear Dale:

Enclosed is a report that summarizes the public participation and two public meetings related to the Upper Southeast Salt Creek Trunk Sewer project. It's been a pleasure working with you and your team. Please do keep us in mind if we can assist in any future efforts.

Yours Truly,

Vicki B. Luther, PhD.

Report Upper Southeast Salt Creek Trunk Sewer Project Open House March 25, 2004

7:00 – 9:00 p.m. Scott Middle School

EA Presenters:

Holly Lionberger Dale Schlautman Deanna Pulse

Commentary: Lee Gustafson (EA) Steve Masters

Heartland Center Facilitators:

Mary Emery Reggi Carlson **Participants:**

Moni Usasz Harlan Layton Phyllis Hergenrader Gary Hergenrader

Terry

Mary Roseberry-Brown

Terry Genrich

Meeting Notes/Discussion

Mary Emery opened the meeting, welcomed participants, reviewed the agenda and asked people to introduce themselves. Participants were given three handouts that served as support materials for evening's main topics:

- 1. Summary of Comments/Discussions from the public meeting on March 4,2004
- 2. Preferred Route Refinements
- 3. Park Restoration Options

Summary of Comments/Discussions

Holly Lionberger began the Power Point presentation and group discussion by explaining that the engineering team had taken a "walk in the park" to get a closer look at preferred route, which runs through the eastern edge of Wilderness Park. She provided a summary of the most commonly asked questions and is s raised from the previous meeting. (See handout attached.)

One participant asked what will be involved in future maintenance for the sewer line. Steve Masters explained that the public does not prefer raised manholes, and that one option would include burying every other manhole through the park.

There was discussion about maintenance of restored areas. One participant said that warm season grasses cannot survive with just annual mowing, and that invasive trees and shrubs would not be stopped by a single annual mowing. Terry Genich explained that

controlled burning could be employed, and that would help the situation. This is an accepted practice.

There was additional concern expressed and explanation regarding the potential cumulative effects of future projects in the area. Holly explained the importance of the gravity factor to installing a sewer line. Other utilities do not depend on gravity, and may not need to follow the same route a proposed sewer route.

Route Refinements

Dale Schlautman explained that construction easements required greater footage than permanent easements. He used a map of the area to orient participants and describe features along the route, such as manholes, railroad tracks and right-of-way, and storm water detention cells. (See handout).

In describing the northern edge of Wilderness Park he explained the need to provide a buffer between the park and the railroad tracks for a sight and sound barrier, and noted that the first 50 feet into the park included better trees and a potential maintenance trail.

He pointed out that the route was designed with an influx, which resulted in a 50 to 100 foot buffer. This influx would save stands of walnut and hickory trees, would involve a little less coverage because of a natural slope, however, there would be some additional costs because the influx lengthened the route somewhat.

Dale then introduced three options for the sewer line to cut across the railroad tracks.

Option 1 is to cut across just north of a burr oak stand of trees and about 150 feet away the Salt Creek oxbow.

Option 2 is to have a much less severe (less than 90 degree) angle and begin the cross over farther north. However, it is not typical for the railroad to accept this design, and they are not legally bound to do so.

Option 3 would cut across the edge of the burr oak trees.

Steve Masters asked about the elevation of the storm cell to the pipe. The answer is about 20 feet. Participants said that they were more worried about the creek than the storm cell. Dale said that the challenge of moving the crossover farther north is getting through the outcropping of sandstone, however, it is still feasible.

Participants requested further information about why a more northern crossing was difficult. The reason given was that moving north increases the depth of drilling to at least 25 feet instead of 10 feet, plus the boring would need to go through limestone.

Option 1 provided at least 150 feet from the nearest manhole to the creek's oxbow.

Participants asked if there would be a need to stabilize the creek so that it didn't move closer to the sewer. The prediction that it would move that way because of future development to the south and increase the flow.

They noted that stabilization takes away from the natural values of the creek.

Holly noted that future development will likely employ practices that minimize runoff.

One participant said that, even so, we need to try to get the railroad to agree to a longer crossover, and move it to the north.

Dale said what it all comes down to is determining how far is a safe distance, and that the engineers felt good about the 150 feet they found when they did their walk through.

Lee Gustafson said that if we study historic photos we can see that we are in good shape with the 150 feet distance. We will have to monitor progress and make changes only if necessary. But perhaps starting the crossover another 25 feet further north is possible. It is a trade off. We may be able to go to the north end of the detention cell without having to go deeper. We have some testing to do yet, such as boring to take samples.

One participant said if going north would help protect the creek and it cost a little more, so be it. It is money well spent.

Another said that angling the cross over less than 90 degrees would be better for sewage flow.

Discussion followed about the railroad's policies, and the difficulty in persuading officials to accept longer tunneling under their tracks.

One participant noted that trees add to the stability of the creek. She said we are using public dollars to stabilize creeks after utilities went in. It disrupts the habitat. We need to keep the sewer line as far away from the oxbow as possible. There was general agreement that more investigation was needed to determine if the crossover could be moved north.

Dale reminded people that boring required a huge hole just to get the boring equipment in. One participant said that rehabbing a golf course greens and fairways would be easier than stabilizing a creek.

It was mentioned that 10 to 12 manholes would be needed within the park.

The question was asked, When will operation begin? The answer is about three to four years out.

Another question, What precautions will be in place to prevent sediment pollution? The answer was that construction would need a control plan; also protecting the wetlands would be a consideration. The lay of the land, however, is fairly flat, which should help with erosion problems.

Wilderness Park Restoration

After a short break with refreshments, Deanna Pulse presented information and answered questions regarding current conditions and opportunities for restoring the park to a more natural condition following construction.

The engineer's walk through findings included congested small trees competing with grasses and larger trees. As we move west, it clears, but there are areas of invasive thickets. There are a couple of wetland areas, but because of drought there is little vegetation and trees are competing for moisture with the grasses. There are hardwood stands where smaller trees are invading.

Deanna then briefed the group on preparation activities, optional short, tall and floodplain mixture grasses and wildflower mixtures. (See hand out for details of optional recommendations.)

There seems to be a very low ratio of forbs to grass.

Terry said that the parks committee would provide guidance as to what gets planted where.

How would we determine placement of plants? Deanna said that the principle was to create a meandering border/buffer that was more natural than an abrupt barrier, and would encourage the development of a balanced habitat. Grasses are the original habitat before the ground was farmed.

The woodland areas follow the creek bed. The committee should decide what to remove before it is removed.

Since we are dealing with an old farm field we can actually create whatever we want.

There was caution against planting short grass because it does not do well here, but another participant noted that in the right places, buffalo grass thrives just fine when taller grasses do not shade it out.

There were questions about where the construction access road would be. The answer is that an existing roadway that used to go to a farm, near the wetland seemed to be a good choice. Other shorter access points would also be required. We may want to add some protection against erosion in these areas.

What will happen to the dug up soil? It could be incorporated into the site. We will have to look at the borings, because we do not want to spoil the topsoil with waste. There may be a need to ship out some waste, but not much is predicted. If you trench 10 to 15 feet, back into the trench.

Summary

Steve Masters gave a summary of key points discussed at the meeting. He began by saying that the overall goal is to have a good project, that we will be able to look back and hold this project up as an example of the way projects should be carried out.

Having these meetings is really a good component to a good project. It is important to partner with parks and interested people. Once we have a contractor we will put together goals, progress meetings, etc. Some things will be better than expected, and others will be disappointing.

Some thing we will want EA to report on:

Warm season grass selection and management. Terry's committee needs to make sure what is done is right. We are fortunate to have this opportunity. It is a win-win situation for everyone.

The crossing at Rokeby Road, and how it is configured. Optimizing is the goal

Approaching the railroad to allow us more leeway in the angle of the crossover.

Manhole placement and grade.

Soil and sediment, as well as spoils. We do not want to repeat the mistakes that we had with the old landfill.

We will probably need a geomorphology study regarding the oxbow issue.

Participant Question? How will we find out about how issues are resolved? We will have one more meeting to report on our recommendations. I've pledged to work closely with parks and also the NRD on this. We will be doing another meeting and inviting people back.

The report is tentatively scheduled for August of 2004. We will do some additional data collection and then that will conclude the preliminary design. Then partners will begin the final design process.

Evaluations

Two persons returned evaluation sheets, rating the evening presentation as a 4.5 on a scale of 1-poor to 5-excellent. Comments revealed that participants liked the open process, and that all projects should be done in this way.